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Networks and Problem Recognition: Advancing the Multiple Streams Approach

Abstract

This paper responds to recent calls for more theoretically driven advancements of the Multiple Streams Approach (MSA). It does so by bringing networks theorizing into dialogue with the MSA; highlighting the inclusionary and exclusionary power of networks for determining problem frames and issue recognition. Subsequently, the paper argues that the addition of networks provides a clearer articulation of the role of institutions in steering problem stream processes, which have often been neglected at the expense of a focus on agency. The paper puts forward two propositions. The first is that an issue is more likely to be recognised as a problem if it is considered compatible with the ‘appreciative system’ of the network confronted by it. The second proposition is that the larger and less homogenous the network is, the more susceptible it will be to windows of opportunity opening in the problem stream. These propositions are explored through a comparative analysis of recognition of quality of life as a problem in two local level transport sector networks in the UK. Support for these propositions in the findings suggest that the introduction of networks into the MSA can reduce ambiguity and therefore fortuity in relation to problem recognition; second, that the power of the policy entrepreneur can be facilitated or constrained by the institutional context; and third, that comparing multiple issues and their interactions is important for further advancement of the MSA.

Key words: Multiple Streams Approach; Policy Networks; Problem Recognition; Framing;

Introduction

Since its initial articulation over thirty years ago, Kingdon's Multiple Streams Approach (MSA) has been cited over 12,000 times, proving itself one of the cornerstones of public policy analysis (Cairney and Jones 2016). While the approach has been applied to numerous stages of the policy process, its original purpose and central application has been to understand agenda setting; enabling explanation of why some ideas capture the imagination of politicians and policymakers at some moments in time, while others do not. However, despite its large body of citations, numerous recent systematic reviews of the MSA literature have voiced concern that the approach is lacking in theoretical development (Cairney and Jones 2016, Jones et al 2016, Zohlnhöfer, Herweg and Rüb 2015).

Zohlnhöfer, Herweg and Rüb (2015, 414) argue that there has yet to be substantial academic debate on the merits and shortcomings of the MSA because applications of the MSA have 'been more interested in explaining the individual cases under study... than being engaged in modifying the framework'. This sentiment is echoed by Cairney and Jones (2016, 53) who argue that the 'empirical impact of MSA has been considerable, but the untapped potential for theoretical and empirical advance is far greater'. Jones et al (2016, 28) also lament the failure to move 'beyond obligatory identification' of the MSA's core concepts (the politics, policy and problem streams, the policy entrepreneur, and window of opportunity) in the majority of MSA applications, and argue that the 'MSA needs perhaps fewer empirical studies and more systematic theory development' (Jones et al 2016, 31).

This paper contributes to theoretical development of the MSA by advancing understanding of the role of institutional dynamics within the MSA; institutions having largely been overlooked by the approach (Mucciaroni 1992; Zahariadis 2014, 44). Institutions are defined here in line with Hall (1986, 19-20) as 'the formal rules, compliance procedures, and standard operating practices that structure the relationship between individuals in various units of the polity and the economy.' In particular, the paper follows the suggestion of Cairney and Jones (2016, 53); examining 'how the MSA relates to other policy theories and concepts' – in this case networks – in order to develop the MSA's theoretical strength going forward. The problem stream, the most undertheorized of the MSA's three streams, is the focus here (Knaggård 2015). It will be argued that networks play an important role in the development, framing and sustaining of ideas that in turn facilitate and constrain problem recognition (Schmidt 2008; 2012, Schön and Rein 1994). Therefore, more clearly elucidating the role of networks in the MSA helps to advance a more comprehensive understanding of the mechanisms for problem recognition and windows of opportunity in the problem stream.

The paper has eight sections. It begins by providing a brief introduction to the MSA. The second section outlines the importance of issue framing to problem recognition within the MSA, and how this has been discussed in the literature to date. The third section outlines the importance of networks to framing, and in turn problem recognition. Section four then goes on to develop two propositions that result from the recognition of networks in the problem stream, introducing the notion of 'problem compatibility'. Section five then outlines the methodology for testing the propositions; a comparative analysis of two local transportation sector networks in the UK; the Sheffield City Region and the City of York. Section six presents the findings, which are drawn from

over 40 semi-structured interviews¹ with individuals from a cross section of local, regional and national institutions involved in transport policy-making in the two local policy networks. Section seven then analyses the strength of the propositions and their implications for the MSA, before conclusions are drawn in the final section.

The Multiple Streams Approach

At the core of the MSA are three independent process streams – policy, politics and problem – that are ‘governed by different forces, different considerations, and different styles’ (Kingdon 1995, 88). In the policy stream policy ideas ‘float around’ in a ‘policy primeval soup’ and are reformulated and developed over time through a process of ‘softening up’ in which ideas are tested and challenged within the policy community, consisting of specialists and those with expertise in the policy area in question. The politics stream is composed of dynamics relating to the ‘public mood, pressure group campaigns, election results, partisan or ideological distributions...and changes in administration’ (Kingdon 1995, 145). The problem stream involves the recognition of any number of potential problems that compete for attention. For Kingdon, problems are more likely to be acknowledged if there is a more or less systematic indicator of a problem; a dramatic event occurs; there is sufficient load (capacity) to deal with the problem, or ‘feedback from the operation of existing programs suggests that not all is well’ (Kingdon 1995, 90).

Any one of these three process streams can facilitate or constrain an issue rising on the agenda. Sometimes there may be a recognised problem, but no obvious policy solution. Alternatively, there may be a recognised problem and an appropriate policy response, but the political circumstances are not conducive to action, and so on. However it is when these streams are coupled together that there is the greatest opportunity for policy change. It is when a ‘window of opportunity’ occurs that this coupling is most likely. These windows are opened either through ‘happenings’ in the politics stream, for example an election, or through the appearance of a compelling problem in the problem stream, for example a fatal accident (Kingdon 1995, 20).

Policy entrepreneurs are particularly important in coupling the streams during these windows of opportunity (Kingdon 1995, 179-183). Policy entrepreneurs are advocates ‘who are willing to invest their resources – time, energy, reputation, money – to promote a position’ (Kingdon 1995 179). As Zahariadis (2014, 35) notes however, they ‘are more than mere advocates of particular solutions; they are power brokers, coalition enablers, and manipulators of problematic preferences and unclear technology.’ Policy entrepreneurs may not always be successful at coupling streams. Their success is linked to certain attributes of the policy entrepreneur such as persistence and access to policymakers, but also to their skill in formulating strategies; for example, in framing policy problems in a language more likely to be received well by policy makers and politicians (Huitema et al 2011; Zahariadis 2008).

The MSA builds on the Garbage Can model of decision-making (Cohen et al 1972; March and Olsen 1979) to argue that these processes happen under the condition of ambiguity, in which there are numerous different ways of thinking about the same circumstances or phenomena (Zahariadis 2014, 26). Ambiguity is a core assumption of the MSA and has three key elements (Herweg et al 2017). The first is that participation in organisations is

¹ Interviews conducted between 2012 and 2014.

fluid; turnover of policy makers is high, and they ‘drift from one decision to the next’ (Zahariadis 2014, 27). Second, is the recognition that a clear policy objective is rare; due to time constraints politicians tend to make decisions without clearly articulating their preferences, indeed the lack of clarity may actually enable the decision-making process. Third, it is often unclear to policymakers, what processes they have at their disposal in order to turn inputs into outputs; jurisdictional boundaries are unclear, and ‘turf battles’ between different departments or agencies are common (Zahariadis 2014, 27).

Issue Framing and Problem Recognition

Given the importance of ambiguity to the MSA, it is unsurprising that in recent years, some of the strongest contributions to the MSA’s theoretical development have drawn on the interpretivist tradition (see for example, Dudley 2013, Knaggård 2015, Scholten 2013, Winkel and Leipold 2016). A subset of this literature is that on framing and problem definition, which highlights how policy positions rest on ‘underlying structures of belief, perception, and appreciation’ that construct policy problems in particular ways (Schön and Rein 1994, 22). This literature argues that contrasting frames exist within the policy making process that can create ‘contests over the social meaning of an issue domain where meaning implies not only what is at issue but what is to be done’ (Schön and Rein 1994, 28). It is the recognition that problems can be defined in multiple different ways, that the frames that shape these are usually tacit (exempt from conscious attention and reasoning by those who hold the frames), and that these frames have consequences for policy making, that are the important take home messages from this literature for the MSA, and particularly resonate in relation to the problem stream (Schön and Rein 1994, 23).

For example, Zahariadis (2008, 522) has highlighted the power of framing as a strategic tool in the policy entrepreneur’s arsenal, arguing that coupling of the politics, problem, and policy streams is more likely if the policy entrepreneur can activate ‘particular dimensions of a problem to fit the solution in language that appeals to different policy makers.’ Knaggård (2015) has also reflected on the role of agency in issue framing, but has argued that framing starts earlier in the MSA process; within the problem stream rather than during the attempt to couple streams. Knaggård (2015, 452) subsequently introduces the concept of a ‘problem broker’; someone who frames ‘conditions as public problems and work[s] to make policy makers accept these frames’. The concern for Knaggård (2015 452) is that by arguing that it is the policy entrepreneur that defines or frames the problem, the analytical separation of the three streams is at risk; ‘coupling becomes the same act as defining problems’. In turn it is powerfully argued that by ‘focusing only on policy entrepreneurs, we risk missing how policy entrepreneurs are enabled or limited by how problems are defined as well as how these definitions affect agenda-setting and policy making’ (Knaggård 2015, 452).

This paper takes Knaggård’s (2015) argument as its starting point; that problem definition in and of itself can affect the process of agenda setting and policy making, and that the process of problem definition occurs within the problem stream. However this paper shifts analytical attention away from framing as solely a tool of agency; recognising the role of institutional dynamics in the creation of frames. The focus here is on the inclusionary and exclusionary power of frames created by a network. Where the emphasis in the MSA literature has previously been on the ability of an individual (policy entrepreneur, problem broker) to frame a problem to make it more

appealing to policy makers, here the focus is on how the institutionalization of frames within an ‘appreciative system’ of a network can delimit recognition of problems, and in turn affect problem recognition.

In *Agendas, Alternatives and Public Policies* Kingdon (1995, 110) notes the importance of framing and, in particular, problem definition to the MSA. The MSA highlights several triggers for problem recognition within the problem stream; including indicators, focusing events, and feedback. However, Kingdon (1995, 109) recognises that these triggers only highlight conditions, and that conditions only ‘become defined as problems when we come to believe that we should do something about them’. As a consequence, Kingdon (1995, 110) argues that problems have a ‘perceptual, interpretive element’ to them. There are three factors – values, comparisons and categories – that have an effect on the way conditions are translated into problems (Kingdon 1995, 110-113).

With regards to values, Kingdon (1995, 110) argues that a mismatch between the condition and ‘one’s conception of an ideal state’ may cause a condition to be determined as a problem. The example is given of indicators showing unequal income distribution amongst the population; if the policy maker believes that the government should not be used as a tool to address poverty, then they may not define the existence of poor people as a problem, whereas a different policymaker, with a different value-set or ideology may. Unfavourable comparison can also lead to problem recognition, for example some citizens receiving quality health care coverage while others do not, or one country ‘lagging behind’ another in terms of infrastructure provision (Kingdon 1995, 111). Kingdon (1995, 111) also argues that problems can be placed into different categories and that ‘much of the struggle over problem definition centers on the categories that will be used and the ways they will be used.’ He goes on to note that a condition’s ‘category structures people’s perceptions of the problem in many important respects’ (Kingdon 1995, 111). For example, Kingdon notes how defining disabled access to subway services as a civil rights issue rather than a transportation issue, was integral to the passing of legislation regarding subway retrofitting in the 1970s (pg. 112).

Kingdon (1995, 206) argues that there are factors that ‘limit randomness’ within the problem stream, noting that conditions that conflict with important values or are placed in an inappropriate ‘category’ are ‘less likely to be translated into problems than conditions that are evaluated or categorized appropriately’ (Kingdon 1995, 206). Kingdon (1995, 112) also argues that the ‘old categories and old means of classifying subjects into those categories tend to persist’ and that ‘In the face of changed needs or new problems, government’s first instinct is to preserve the old categories as long as possible’ as changing the categories ‘represents a threat to somebody’s interests’ (pg. 112). Kingdon offers no further explanation as to how the categories are created, or why they may persist. However, it is argued here that such ‘limitations on randomness’ can be elucidated through recognition of the framing power of networks.

Networks and Problem Recognition

The argument that policymaking is the exclusive purview of government has long been usurped by the notion of policymaking as a process of ‘governance’; governing with and through networks (Bache 2003; Marinetto 2003, Rhodes 2007, Stoker 1998). It is argued here that it is these networks that provide the topography for the problem stream and problem recognition. The networks literature is a mature and diverse one (Börzel 1998).

However, underpinning the understanding of networks is an institutional approach; that there exist ‘sets of formal and informal institutional linkages between governmental and other actors structured around shared interests in public policymaking’ (Rhodes 2007, 1244). It is important to be clear that this notion of networks is different from the language and understanding of ‘policy communities’ used by Kingdon (1995, 116). Kingdon (1995, 116) understood policy communities as exclusive to the policy stream, referring to ‘a community of specialists’ who have expertise in a particular policy area and seek to find policy solutions. This paper understands networks to mean something more far reaching; ‘as critical mediating variables that affect the distribution of power, the construction of interests and identities, and the dynamics of interaction’ between individuals or organizations (Ansell, 2008, 75) and therefore not exclusive to the policy stream.

The understanding of networks put forward here therefore means it is possible for a network to consist of multiple organizations whose primary activities can be said to relate to different ‘streams’ of agenda setting activity (the politics, policy, or problem streams). However, this does not amount to an infringement of the independence of each of the three process streams. In elucidating why, it is important to recognise the key distinction Kingdon (1995, 87) makes between ‘participants and processes’ in clarifying the MSA’s position on stream independence. Kingdon (1995, 87) notes how ‘Conceptually...any actor can be involved in any stream and some of them are actually involved in several’. He argues that ‘Members of Congress could both run for re-election [politics stream] and formulate proposals [policy stream], for instance...’ but that ‘...in practice, while many participants do cut across the three process streams, there is also some specialization (Kingdon 1995, 87). Therefore, to put it in Kingdon’s parlance, focusing on networks here allows us to explore how the interconnections of *participants* (individuals or organizations) affects MSA *processes*; specifically problem stream processes.

Five institutional principles underpin the network concept used here; first, that any organization can be dependent upon another organization for resources. These resources may be legal (they have a role enshrined in law), informational (knowledge and expertise), financial (from taxes levied or monies granted to them) or political (legitimacy through an election or public support) (Rhodes 1999, 80). Second, these resources need to be exchanged in order for organizations to achieve their goals; the understanding being that no organization has all the resources necessary to achieve their desired outcomes. Third, although decision-making within the organization is constrained by other organizations, the dominant coalition (the organizations with most resources) retains some discretion in the sense that they are likely to determine the policy approach. Fourth, the dominant coalition employs strategies to regulate the process of resource exchange; they set the ‘rules of the game’. And fifth, variations in discretion are a product of the goals and the relative power potential of the organizations that are interacting (Rhodes 2007, 1245).

It is through the exchange of resources that the ‘dominant coalition’ of the network (those organizations with the most resources) develops an ‘appreciative system’ that influences how policy problems are perceived (Smith 2000, 96). The concept of an ‘appreciative system’ brings an ideational element into the networks approach and refers to; ‘...that combination of factual and value judgements which describe the “state of the world” or “reality”...and provide a general map for understanding and steering a course through the environment’ (Rhodes 1999, 83). This appreciative system in turn determines the categories (the frames) through which conditions are considered, and in turn recognised as problems (or not) (Rochefort and Cobb 1994; Schön and Rein 1994).

Consequently, as Bosomworth (2015, 1451) notes; ‘Repetitively expressed in a sector’s discourse and practices, a dominant frame can structure existing beliefs and norms to produce systematic biases...’ In turn, institutionalized network frames specify ‘not only the goals of various policies and the kind of instruments that can be used to attain those goals, but also the very nature of the problems they are meant to be addressing...’ (Bosomworth 2015, 1451). Therefore the interactions of the institutions forming the dominant coalition within the policy network will preference the recognition of some conditions as problems over others due to its appreciative system; values, beliefs and way of seeing the world.

Given the MSA’s emphasis on process and agency at the expense of institutions (Barzelay and Gallego 2006; Mucciaroni 1992), it is therefore unsurprising that the MSA literature has seldom drawn on networks theorizing. One notable exception is the work of Zahariadis and Allen (1995) who utilised networks theory to better explain the ‘softening up’ process in the policy stream. In identifying that Germany and Great Britain responded differently to the idea of privatization as a policy solution, they argue that ‘...networks matter. If they didn’t, we would observe that the evolution of privatization in Germany is quite identical with that of Great Britain, despite significant differences in the structure of the networks’ (Zahariadis and Allen 1995, 78). This paper adopts the same comparative logic to elucidate the two propositions set out below.

Problem Compatibility: Advancing the Problem Stream

The recognition that (problem) frames can be created and reinforced through networks challenges the MSA to reflect on the role of the institutional context in which problems are being recognised, and suggests that problem recognition may be influenced by more than the agency outlined in the notion of the problem broker or policy entrepreneur.

The first part of the argument forwarded here is that, in some cases, the reason a problem is recognised (or not) is not simply to do with factors relating to the framing of the problem in and of itself (its severity, urgency etc.), but to do with the compatibility of the problem, with the frame of the network’s appreciative system over which the problem hangs. Therefore while a problem must ultimately be recognised as such by policymakers and coupled with the other streams of policy and politics (by a policy entrepreneur) it is the network, and in particular the appreciative system of network’s dominant coalition, that determines the boundaries within which problem recognition occurs. This paper therefore puts forward the proposition that;

P1: Problem recognition is more likely if the problem is compatible with the appreciative system of the network’s dominant coalition.

One of the key findings of the networks literature is that the typology of the network is important for determining policy outcomes, in particular the number, and the type, of organizations in the network (Ball 2008, Compston 2009, Greer 2002, Hindmoor 2009, Somerville and Goodman 2010). The number of organizations is important because the more there are, the greater the number of resources that are likely to be exchanged, the more interests that need to be satisfied and the greater the potential for disagreement to exist. As Rhodes (1999, 87) notes; ‘irrespective of resources, strategies or personalities, the larger the number of participants, the more complex the process of exchange, the greater the constraints on participants and the more difficult it will be for any participant to attain his [sic] desired outcome.’ The type of organizations involved are also important for a

similar reason; different types of organization are likely to have different interests, and ideas, and values systems, which in the process of resource exchange may weaken trust and subsequently the ability to work together coherently.

In thinking about problem framing these variables are important because they will affect the strength of the appreciative system of the network, and in turn the strength of the frame through which potential problems are understood and recognised by the network (Bosomworth 2015, Schmidt 2012, Schön and Rein 1994). The smaller the number of actors and the more homogenous the network is in terms of organization type, the stronger the resource dependencies are likely to be. As a consequence, it is more likely there will be a stronger appreciative system (frame) through which problems are understood. The larger and more diverse the network is, the weaker the shared understanding, and the less coherent the appreciative system (Marsh and Rhodes 1992). Therefore, in building on the first proposition, it is proposed here that the typology of the network will determine how open the network's appreciative system is to change and therefore how open the network is to recognition of 'new' problems.

P2: The more organizations a network consists of and the more varied these organizations are, the more likely it is that the dominant coalition alters a condition's category if there are changes in the problem stream.

In order to demonstrate the role of networks in problem recognition and test the two propositions outlined here, a comparative analysis of two local level networks is undertaken. It is to the methodology for this comparison that the paper now turns.

Methodology

In order to test the two propositions outlined above, a single case embedded research design is used. This is an approach where, within a single case, attention is paid to sub-units (Yin 2003, 42). Here the single case study is the UK transportation sector. Transportation is the focus here because given the nature of mobility and transportation infrastructures which tend to cross numerous different legislative boundaries, policy in this area often requires the pooling of resources across different organisations (Bache et al 2015). Within the UK context the transportation sector also provides the opportunity to explore the dynamics of recognition of the 'problem' of quality of life within the sector, which before the publication of a central government strategic policy review – *Towards a Sustainable Transport System* (TaSTS) (DfT 2007) – was not explicitly recognised as a problem for transport policy to seek to address. The identification of a quality of life 'challenge' at a particular moment in time (with the publication of TaSTS), also enables processes of problem recognition to be understood over time; temporality being important to the MSA.

In the discussion paper *Towards a Sustainable Transport System* (DfT 2007) the UK government argued that 'a well-functioning transport system is vital to the continued success of the UK economy and to our quality of life' and presented 'quality of life' as one of five national transport challenges for the sector to address over the next decade. The five strategic challenges, elaborated on in the document *Delivering a Sustainable Transport System* (DaSTS) (DfT 2008, 7) were; to support national economic competitiveness and growth; to reduce transport's emissions of carbon dioxide and other greenhouse gases; to contribute to better safety, security and health and

longer life expectancy; to promote greater equality of opportunity for all citizens; and to improve quality of life for transport users and non-transport users, and to promote a healthy natural environment. Subsequently in 2009 the Department for Transport released guidance for local transport authorities on the development of their third Local Transport Plans², to be created by 2011. The guidance suggested that all five challenges should be treated as equal priorities, but that each local authority had the discretion to decide which challenges it found most appropriate for them to pursue.

In May 2010, a year before the Local Transport Plans were due for publication by each authority, the Conservative-Liberal Democrat coalition government came into power. The Coalition government upheld the local authority guidance on the plans, and restated it was the relevant document for Local Transport Plan preparation (Butcher 2013, 6). However, by this time the financial crisis had hit the UK (in 2008), leading to economic recession. The paper therefore focuses on the period of development of the third local transport plan (covered by the guidance that included the quality of life challenge) and which covers the period pre and post financial crisis.

The two sub-units for analysis are the local transportation (policy) networks of two different geographical areas; the City of York and the Sheffield City Region. The two areas have important commonalities. They are both in England, they are both in the same region of the country, and both prepared their third local transport plan over the same period and under the same central government guidelines. However, they differ in terms of the network structure responsible for the creation of the local transport plan. Within the city of York, at the time of research, the City of York Local Authority had the primary responsibility for creating the third Local Transport Plan, with the plan only covering the City of York local authority area. In contrast in the Sheffield City Region, at the time of research, one Local Transport Plan was developed for all four local authority areas that legally constituted the Sheffield City Region (Sheffield, Rotherham, Barnsley and Doncaster). Responsibility for developing and approving the Local Transport Plan in turn lay with a sub-regional organisation – the Integrated Transport Authority (ITA). The City of York was therefore picked on the assumption it would have a relatively small network of actors involved in development of the third local transport plan, and that the Sheffield City Region's network would be larger and less homogenous.

Comparative analysis of these two units enables the importance of the independent variable (the network) on outcomes (problem recognition) to be explored more systematically. However, it is noted that validity claims based on small n case study research are by their nature limited (Yin 2003). Therefore analytical generalisations (and specifically here, the definitive confirmation of the two propositions) cannot be made on the basis of these specific cases alone. This comparative analysis therefore represents an initial exploration of the propositions that will need to be interrogated further in future research (Yin 2003, 37).

In order to identify the network in each sub-unit case, an initial documentary analysis relating to transportation policy in each locality was undertaken, sources included local, sub-regional and national policy documents,

² Local transport authorities have a duty under the Transport Act (2000) to create a Local Transport Plan that sets out the local authority's strategic plan for transport in their area. At the time of research the Local Transport Plans needed to be renewed every five years, hence the third Local Transport Plan being due for publication in 2011.

consultation protocols, minutes of meetings, press releases, and media reports. From this documentary analysis a list of organisations and interviewees believed to be in each network were identified, and then built upon using the 'snowball' sampling technique (Biernacki and Waldorf 1981). The documentary analysis also enabled the information provided by interviewees to be located within the wider political system in which they operate and consequently enabled consideration of the structural, institutional and formal relational elements of interaction of network participants to remain forthright in the analysis. Documentary analysis also enabled the identification of how relationships between actors were supposed to operate from a formal legislative account, and alongside interview data, highlighted any potential discrepancies; elucidating the rules and relationships as they were borne out in practice.

During semi-structured interviews with people identified as participants in the networks, they were asked to provide information about their organisation in relation to local transport planning, their role within the organisation and their activities in relation to local transport plan development. Interviewees were also requested to provide information on what their priorities were in relation to the third local transport plan and to identify who they deemed the main actors to be in the transportation (policy) network, why, and how they influenced the third local transport plan process. Participants were also asked to explain how (if at all) the challenge of quality of life was operationalised and understood when developing the third local transport plan and the influences on this understanding.

Therefore, an organization was determined to be part of the network if it played a role in the development of the third local transport plan, however minor or tangential. This was determined through the documentary and interview analysis. Participants were identified as part of the dominant coalition of the network when they were found to have resources (informational, legal, financial or political) that meant they played an integral role in shaping the development of the third local transport plan in the respective area. For example, if the organization's acceptance of the Plan was necessary in order for it to be implemented, as enshrined in law. Or for example, an organization conducted the majority of data gathering and analysis for the Local Transport Plan.

Findings

City of York

The dominant coalition in York was identified from the data as consisting of organizations under the umbrella of the City of York Local Authority. At the time of research, the Directorate of City Strategy – part of the local authority, and made up of policy officials – led on the Local Transport Plan and transport policy more generally and therefore held the majority of the informational and financial resources within the network. The City of York Council Executive (elected members drawn from the majority political party of the Council) had to approve the Directorate's proposals (holding key political resources) and then have them ratified by the full City of York Council (holding the legal resources integral to decision making). The cross-party Traffic and Congestion Ad Hoc Scrutiny Committee made up of local councillors was also an important source of influence due to its informational and political resources, and also formed part of the dominant coalition of the network.

Other network participants included the York, North Yorkshire, and East Riding Local Enterprise Partnership; Leeds City Region Partnership Board; city centre businesses, the Quality Bus Partnership, community

organizations, and transport operators. However, it was noted that engagement with these groups was more consultation orientated and, as noted by one member of the dominant coalition ‘By the time it gets to the consultation we have already thought of everything and know the detail, so unless...there’s a mass swathe of opinion about it...there isn’t much of a change [in the policy].’ (Senior Local Transport Official 6).

All those within the City of York’s dominant coalition within the network highlighted economic growth as their key concern, and had done so since the introduction of local transport plans in 2001, which brought the network’s actors together in this way and therefore established resource interdependencies that formed the dominant coalition. The dominant coalition strongly identified the key barrier to economic growth as traffic congestion (City of York Council 2001; 2006; 2010a; 2011). As one interviewee (Stakeholder 1) noted; ‘...it’s about business...it’s about saying you know, if we want to attract business to York it’s no good if they’re put off at day one because they just see a load of traffic jams everywhere.’

This view was supported by data from the Traffic and Congestion Ad-hoc Scrutiny Committee and data from within the Directorate of City Strategy that showed that the problem of congestion was becoming more acute during this period (City of York 2010b). The Committee was set up by the City Council to help gather ongoing evidence to inform their approach to transport and they commissioned research and a residents’ survey into the best ways to minimise congestion in the city. This was subsequently incorporated into the third Local Transport Plan. In light of the findings, the cross-party group agreed they should propose that physical controls be put in place in the city centre, with congestion charging an option if these failed. The Committee also took evidence specifically on the link between quality of life and transport, finding evidence that congestion reduced quality of life through its effects on social interaction (City of York Council 2010a, 4).

Support for this approach was reflected in the City of York Council’s residents’ survey as part of the local consultation. In particular, the survey showed that 81 percent of respondents felt tackling congestion was the most important challenge the city faced, with managing traffic in and around the city the second most important issue (75% of respondents) (City of York 2010b). As one interviewee (Stakeholder 2) noted; ‘I think there’s been more acceptance that the car isn’t the way to go in York, because you just join a traffic jam. So I think there’s more understanding amongst more people, and that’s taken quite a long time.’

A councillor, acting as a policy entrepreneur (or more accurately, problem broker) had a strong personal interest in reducing the effect of cars on social interaction and the environment, and linked this with arguments about how to boost economic growth. As the entrepreneur elucidates; ‘My personal motivation came initially from the environment and sustainability agenda...I subsequently realised it is also about quality of life... the effect of traffic on communities... the effect of cars and pollution and noise; driving people into their homes and off the streets, away from social interactions’ (City of York Councillor 1). The councillor had been the leader of their party on the City of York Council, transport portfolio holder for a number of years, and was referred to by interviewees as the ‘driver’ of the City of York’s approach to transport, and lobbied for the creation of the Scrutiny Committee when out of office.

Subsequently, when quality of life was promoted by national government as a problem which local government should be addressing, it was recognised and embraced by York due to its compatibility with its *raison d’être* of

pursuing economic growth through deterring vehicular traffic from the city centre. As one interviewee noted (Senior Local Transport Official 7); ‘...the majority of the DaSTS proposals were I think, [about] connecting people, but not necessarily about road building, and it’s looking at the other ways around how you can get people around...York has always been very strongly in favour of how else people can get around, other than using the car.’ One interviewee (Stakeholder 3) noted how the loss of the policy entrepreneur’s party majority on the Council, coupled with the economic downturn, did not alter York’s approach; ‘the policy framework had put down its roots.’ Central to recognition of quality of life was the understanding that the removal of traffic would improve the quality of public streets and places and improve quality of life, which in turn is compatible with the network’s understanding of how to encourage economic activity (City of York 2011a, iii; 2011b, 39). As one interviewee (Local Transport Official 1) noted; ‘Quality of life is about trying to see transport as about people and movement, and not just a technical engineering solution. So particularly when you go into the city centre, the impact of cars and how easy it is for you to walk around, or travel around.’

Sheffield City Region

At the time of research, the local transport agenda in the Sheffield City Region was developed by a larger and more diverse dominant coalition than that for the City of York.³ Its dominant coalition consisted of the sub-regional Integrated Transport Authority, which was comprised of politicians from each of the four local authorities constituting the Sheffield City Region (each of whom supported by an official from their respective local authority). The Integrated Transport Authority had to approve the third local transport plan and therefore had key legal and political resources. The Passenger Transport Executive, a sub-regional organization (made up of policy officials) had primary responsibility for developing policy proposals and therefore had the primary informational resources. As one interviewee noted (Local Councillor and Member of the ITA 2) ‘...inevitably... the PTE [Passenger Transport Executive] have a big input because they are doing the analysis...it’s the PTE that has the statistics and information, the officers have a substantial role...’ Each of the four local authorities that legally constituted the Sheffield City Region (Barnsley, Doncaster, Rotherham and Sheffield) were also part of the dominant coalition as they contributed financially to the Integrated Transport Authority and each had to approve the Integrated Transport Authority’s policies, therefore having key financial, informational and legal resources.

Other network actors included the Sheffield City Region Local Enterprise Partnership, with whom the dominant coalition were ‘conscious’ to get their endorsement and were engaged with ‘predominantly through the Passenger Transport Executive’ (Local Transport Official 3). The Chamber of Commerce, and other business groups were also considered part of the network, as were the transport operators, environmental groups, and community advocacy organizations. However, these groups were not considered by participants to hold resources that were integral to the development and steer of the third local transport plan and therefore not considered part of the dominant coalition.

Since 2000 when Local Transport Plans were first introduced, the dominant coalition of the Sheffield City Region had understood its core purpose as promoting economic growth in the region (SY LTP 2001; SY LTP

³ The Cities and Local Government Act 2016 established a Combined Authority for the Sheffield City Region, replacing the existing Integrated Transport Authority and Passenger Transport Executive arrangement.

2006; SCR LTP 2011). During this period, the aim of addressing insufficient economic growth had been framed in transport terms as a problem of accessibility; access to jobs and services is limited and stifling economic activity and in turn economic growth. A senior policy official at the Passenger Transport Executive was effective in framing the dominant coalition's understanding of economic growth as a problem of accessibility and that required investment in public transport; stimulating this discourse within the Integrated Transport Authority through attending its meetings, and close working relationships with its Chair and others.

Lack of access to jobs and services was also recognised by the dominant coalition of the network as a key problem associated with poor quality of life, and in turn quality of life was recognised as a problem for the Sheffield City Region; compatible as it was with the aim of promoting economic growth. As one interviewee (Local Politician 1) noted; 'there's lots of clear evidence that if you've got a job, if you've got access to facilities, your quality of life is much improved.' Another highlighted how for the Sheffield City Region, quality of life was '...good access to things, less exclusion, transport can be a very powerful thing there; if people can't get access to a job, social activities, they have a reduced quality of life at the end of the day' (Local Policy Official 2, interview).

The economic downturn however, caused a weakening of the dominant coalition's collective understanding of how to aim to improve economic growth within the Sheffield City Region. The economic crisis was for many of the actors from within the four local authorities (both policy officers and politicians), a 'wake-up call' and 'reality check'. As one interviewee (Local Policy Officer, National Environment Group) noted; 'I think there is a huge...swing in South Yorkshire [the four local authorities constituting the Sheffield City Region] [that says]...we are still way, way, behind and we can't keep up and so we've got to be allowed to do the things we want to do...because they feel they want to be able to build all this stuff so they can be up there with the South East [of England].'

The problem framing of economic growth subsequently changed from *accessibility* to jobs and services, to the *stimulation* of economic growth across the region; 'increasingly it's how do we boost the economy?' (Local Policy Official 3, interview). Therefore, having recognised central government's emphasis on the problem of quality of life, the dominant coalition subsequently moved away from what interviewees considered to be a strong quality of life focus (of emphasising accessibility through the ability to travel by modes other than car, and the need to mitigate for environmental impact) and instead towards stimulating the economy through investment in large-scale (typically road-based) infrastructure projects. As one interviewee noted (Lead Organiser, Local Environment Group); '...we'd had a presentation [from the Passenger Transport Executive]... and it sounded quite promising, it sounded like, oh you know we're going to have a strategy that takes carbon into account, it's going to look at the economy and the environment, and then it felt a bit like did that really carry through...it felt like it was very locked into growing the economy rather than thinking about how to actually improve transport.'

The drive to reframe the network's purpose was driven by the Mayor of one of the local authorities, acting as policy entrepreneur, who also sat on the Integrated Transport Authority. He was very outspoken on the need for the network's key role to be re-framed to attracting business to the area, and providing the road-based infrastructure to support this, and therefore bringing more control back to each local authority. There was a sense

of frustration from some local authority policy officers that attention on economic growth in the past had focused too closely on accessibility and as a consequence, too strongly on ‘softer’ measures that had suited the remit of the Passenger Transport Executive, but which in their view had not delivered on economic growth. One interviewee (Local Policy Official 5) noted how; ‘It was in the interests of the Passenger Transport Executive to say...we can no longer keep providing for the car, we have to look for other measures...and the PTE, with their numbers of staff, their strong presence, and they evolved into having this overview of the strategy [LTP3]...to the point where a lot of money was going to softer measures; cycle paths, walking schemes, supporting the bus’.

The window of opportunity created by the economic downturn was seized upon by the Mayoral policy entrepreneur (or rather, problem broker) to reframe the issue of economic growth in a way that would reassert the influence of the local authorities within the network, and weaken the role of the Passenger Transport Executive. As one interviewee (Senior Local Authority Transport Official 2) noted; ‘There’s always been a suspicion [amongst the network members] that the PTE wants to take over the world. There’s been discussions County-wide within the partnership about sharing resources, about centralising resources, and there’s always been a suspicion that the PTE were trying to capitalise on that and take things over.’ Focusing more on the need for road infrastructure, with which the Passenger Transport Executive did not have a remit, and away from ‘softer measures (where they did have a remit), would in turn bring more financial resources back to each local authority.

While the actors in the dominant coalition were public sector organizations, the tension between local and sub-regional interests meant that interests were not homogenous. This tension was elucidated by one interviewee when describing their position on the Integrated Transport Authority (Local Councillor and Member of the ITA 5); ‘When I get an [Integrated Transport Authority] agenda every month, I get a brief from our planners here [in the local authority]; what the implications are for Barnsley. We get a brief on the document itself and sometimes they’ll say, “This is key for Barnsley, we need that”...And sometimes they’ll say “this doesn’t mean much to us”. But it’s very helpful the advice you get from the transport officers here, who are the steers to where you argue.’

The economic crisis subsequently meant that the network’s understanding of the problem of economic growth was re-framed and recognition of quality of life was no longer compatible with this understanding. The problem of quality of life therefore faded from the agenda.

Analysis

In arguing for the need for greater recognition of the role of the institutional dimension in problem framing and in turn problem recognition within the MSA, the paper set forward two propositions based upon networks theorizing. The comparative analysis of the Sheffield City Region and the City of York cases here help to build support for the two propositions, which in turn help to strengthen the explanatory power of the MSA. Each proposition is discussed here in turn.

Proposition One

The first proposition is that problem recognition is more likely if the problem is compatible with the appreciative system of the network. As outlined earlier, the appreciative system is the 'general map for understanding and steering a course through the environment' (Rhodes 1999, 83) and is created by the dominant coalition of the network (those organizations with the most resources). In both the City of York case and the Sheffield City Region case the core purpose of the network was understood as facilitating economic growth. In both cases, quality of life was recognised as a problem when the dominant coalition of each network deemed that quality of life was compatible with their understanding of the issue of economic growth. In York, the dominant coalition understood the key barrier to economic growth as road congestion and therefore placed a key emphasis on the reduction of vehicular traffic. Therefore, when quality of life was put forward as a problem area for local authorities to address, it was embraced by the network as it aligned with its existing values and beliefs. In the Sheffield City Region, pre-economic crisis, quality of life also aligned with the dominant coalition's understanding of the key to economic growth; increased accessibility through providing choice of mode of travel. However, post-economic crash, the understanding of the key issues at the heart of facilitating economic growth changed to stimulating the macro economy through creating new infrastructure, and with it its existing notion of quality of life was deemed incompatible and therefore faded from the agenda.

In both cases, mechanisms for problem recognition identified within the MSA are borne out, but with networks as important lines of demarcation for this recognition due to the problem categorisations they create, facilitate and re-define. Kingdon (1995, 93-94) highlights the importance of interpretation of indicators for translating conditions into problems. In the York case, data on congestion was interpreted in line with the dominant coalition's existing understanding of issues relating to economic growth, as a sign that more of the same strategy was needed. Moreover, the evidence gathered on the effect of congestion on quality of life aligned with the values and beliefs of the dominant coalition and therefore reinforced the belief in congestion reduction as the appropriate strategic approach. Indeed, the ability to set up a committee with political and informational resources for this evidence gathering purpose was also enabled by the network structures of the city council and supported the dominant coalition's ends. As noted earlier, for Kingdon (1995, 111) a condition's 'category structures people's perception of the problem in many important respects'. In the York case, quality of life was therefore categorised as mutually constitutive of the achievement of economic growth by the network's appreciative system and embraced accordingly.

In the Sheffield City Region however, the 'focusing event' of the economic crash acted as a 'powerful symbol' (Kingdon 1995, 95) to the dominant coalition of the Sheffield City Region that they needed to change (rather than continue) the approach they had pre-crisis. Pre-crisis, the problem of quality of life was categorised in line with accessibility and economic growth promotion, and in turn as Kingdon (1995, 112) notes 'aligned with the interests' of the dominant coalition (as steered by the Passenger Transport Executive). However, the economic crisis altered the balance of power and interests within the dominant coalition and in turn enabled, in Kingdon's (1995, 112) parlance, the problems relating to economic growth to be 're-categorised' as stimulation of the economy and towards solutions (infrastructure building) more in line with local authority interests. Subsequently quality of life was re-categorised as not being related to, and not as closely aligned with, their core purpose of economic growth as currently understood by the dominant coalition and therefore fell from recognition.

However the cases only elucidate two examples; both with quality of life compatible with the appreciative system of the network at the outset, with only the Sheffield City Region's appreciative system changing after an event in the problem stream. In contrast, in studying local government recognition of AIDS as a policy problem, Gent (2000, 145) finds what amounts to 'agenda denial' in some cases, in which public officials intentionally ignore problems in order to 'do what is necessary to protect their own long-term self-interests'. While such findings are consistent with the proposition outline here, it would be fruitful to more closely investigate the network dynamics of areas where the problem (quality of life in this case) had not been recognised in order to determine whether this was due to the appreciative system or other factors. Network dynamics may indeed prove pertinent given that Gent (2000) identifies that it was only over time, as political actors changed, that agenda denial subsided.

Moreover, there are some promising linkages between this first proposition and recent MSA studies that have utilised the concept of 'multi-level governance' for understanding agenda setting processes (Bache and Reardon 2016; Scholten 2013). Multi-level governance recognises that authority and policy competency can be shared across levels of government with implications for policymaking (Hooghe and Marks 2003). For example, in analysing migration integration policies in different cities in the Netherlands, Scholten (2013) notes how 'governments at very different levels can frame problem situations in very different ways, potentially leading to frame conflict' and that 'interaction and policy coordination will be facilitated by the prevalence of a clearly defined and shared policy frame' (Scholten 2013, 219). In a similar vein, Bache and Reardon (2016, 148) argue that 'frame conflicts are exacerbated in conditions of multi-level governance due to the wider range of actors and ideas' and also identify that participants within streams can be from across different levels of government (in their example, international and national). A closer elucidation of the networks dynamics in these cases, in particular the resource dependencies between government (and other actors) across levels, may in turn provide a means for understanding how different problem frames arise, and in turn provide a further avenue for testing the analytical purchase of the proposition laid out here.

The focus on 'compatibility' within this proposition also elucidates the potential effect of the recognition of one problem (and its framing) on the recognition of another problem; in this example, the problem of economic growth on recognition of the problem of quality of life. However, applications of the MSA tend to focus on individual cases (Zohlnhöfer, Herweg and Rüb 2016) which arguably lend themselves to an analysis of a specific exogenous trigger(s) and how this trigger affects problem recognition with regards to an individual agenda; a spike in the number of rough sleepers in relation to the problem of homelessness, for example; or the occurrence of a rail crash in relation to the issue of infrastructure safety. This first proposition however suggests that it is also fruitful and imperative to look at multiple issues and their interconnections at different moments in time and therefore begs for more applications of the MSA that seek to understand more readily the effect of these linkages on problem recognition.

Proposition Two

The second proposition is that the greater the number of organizations in the network, and the more varied the organizations, the more susceptible the network will be to windows of opportunity opening in the problem stream. This proposition is borne out by the two cases. In the case of York, with its small, homogenous

dominant coalition, the framing of its core purpose stayed resilient and unchanged by the economic crisis and therefore quality of life remained on the agenda. However, in the Sheffield City Region case, the network's appreciative system was weaker (with a greater number and less homogenous group of organizations), and as a result its core purpose was reframed in light of the economic crisis. As elucidated above in relation to proposition one, in the York case, problem categorisations remained stable as indicators were interpreted, and new evidence found, to support the interests of the dominant coalition. However, in the Sheffield City Region case, the economic crisis presented a window of opportunity for local authority actors to strengthen their position within the dominant coalition through redefining its core purpose and strategic approach.

Here, the addition of networks to the MSA allows for greater operationalisation of the role of ambiguity in problem recognition, and in turn reduces the level of perceived fortuity in the recognition of problems and the coupling of streams (Zahariadis 2014, 44). As highlighted earlier, the core assumption of ambiguity within the MSA implies that there are numerous different ways of thinking about the same circumstances or phenomena, and that this ambiguity is due to fluid participation in organisations, lack of clear policy objectives and lack of clarity on jurisdictional boundaries creating 'turf battles' between different actors (Zahariadis 2014, 26-27). The existence of networks however, suggests that there will be variation in ambiguity depending on the nature of the network involved. The typology of the network provides an indication of the strength of the shared beliefs and values of the network, and subsequently the strength of its frame (and therefore potential bias) in the face of problem stream triggers that can open windows of opportunity. For example, in the York case study, the small and homogenous nature of the network created an environment in which the policy approach 'grew roots' and due to the shared interests and stable resource interdependencies of the coalition involved, their understanding was resilient in the face of the economic crisis (a focusing event), where the opposite was true in the case of the more diverse and contested resource dependencies of the Sheffield City Region. These findings chime with a comparative analysis of agenda change relating to Strategic Environmental Assessments in city regions conducted by Fischer (2004). Fischer's (2004, 334) research found that the city region with the closest co-operation between stakeholders was the least responsive to activity in the politics stream, and their policy approach therefore remained the most stable over time, in comparison to other regions that had less cooperation.

Networks therefore suggest the potential for more systematic constraint on problem recognition than is currently recognised in the MSA which, as outlined earlier, largely puts problem recognition down to the role of individual agency (Knaggård 2015). Given the small n of this study, this second proposition needs further exploration through more research. However, if the proposition stands up to further scrutiny, then it may help to build more explanatory and predictive power within the MSA in terms of why a problem is recognised in one context, but not in another. Or alternatively, why some agendas remain stable in the face of new problems, while others do not. The smaller and more homogenous the network, the less ambiguity and therefore the clearer the lines of demarcation between condition and its interpretation as a problem, making the network more resilient to problem stream events.

The introduction of networks to the problem stream also suggests that institutional dynamics play a role in facilitating or constraining the policy entrepreneur, who seeks to exploit ambiguity in the coupling of streams. In the Sheffield City Region, in which resources were more hotly contested and beliefs and values therefore more

loosely aligned, policy entrepreneurs had more capacity and opportunity to steer the network. However, the fluidity of the appreciative system meant their position of authority (and therefore ability to affect problem framing) changed over time. The policy entrepreneur from within the Passenger Transport Executive lost their authoritative position to shape the problem framing when the economic crisis challenged the dominant coalition to re-evaluate their beliefs and values; in turn strengthening the position of the Mayoral entrepreneur. However, in the City of York, the close resource interdependencies of the small group of actors meant that once the policy entrepreneur had been able to influence the dominant coalition's appreciative system, it was easier for them to ensure this influence was maintained over time. These findings chime with research by Exworthy, Berney and Powell (2002) into recognition of the problem of health inequalities on local agendas. In discussing local responses to the national health inequalities agenda they note how, 'The rules of the "political game" were invariably unclear...and hence policy entrepreneurs found it difficult to ensure that health inequalities remained on the local agenda. It also meant that the outcomes of the policy process were contingent upon the character of local policy networks and especially the influence of policy entrepreneurs' (Exworthy et al 2002, 92).

Recognising the institutional dimension of problem recognition through the introduction of networks is therefore not to suggest that policy entrepreneurs cannot be effective in placing conditions in appropriate categories, reframing problems, or in gaining recognition for a problem, but that their success in doing so is dependent on more than just their skill and their individual position in an organization, as has been previously emphasised in the MSA (Huitema et al 2011, Zahariadis 2008). The ability of the policy entrepreneur to gain recognition for a problem, and in turn couple the problem stream to policy and/or politics will also depend on the homogeneity and size of the network (the topography of the riverbed) over which the stream is flowing as this determines the strength of its appreciative system.

Conclusion

As noted by Zohlnhöfer, Herweg, and Rüb (2015, 412) the issues facing policy today have become increasingly more complex and contested and therefore with ambiguity as its analytical starting point 'the MSA seems to have become more relevant and suitable than ever before for the analysis of policy making in advanced democracies'. However, as noted at the outset of this paper, the MSA has suffered from a lack of sustained theoretical development while at the same time being widely applied to policy systems, units of analysis, and policy stages not initially explored by the MSA (Cairney and Jones 2016; Jones et al 2016; Zohlnhöfer, Herweg, and Rüb 2015). In bringing the role of networks into the MSA, this paper has therefore sought to contribute to a renewed impetus for conceptual and theoretical refinement of the MSA, and in particular aimed to elucidate the causal mechanisms at the heart of the MSA's concept of the problem stream.

In particular, in bringing the networks approach into dialogue with the MSA, the paper has sought to tease out more readily the influence and role of institutions in problem definition and issue recognition; institutions being a key part of the policy process often overlooked by MSA. Specifically the paper has built on Knaggård's (2015) critique of the level of agency afforded to the policy entrepreneur within the MSA, to argue that networks play a critical role in the development, framing and sustaining of ideas which in turn act as inclusionary and exclusionary lines of demarcation for problem definition and issue recognition. In providing two propositions relating to the role of networks as a mechanism in problem stream activity, it is hoped that they

can help develop the MSA's capacity for explanation, and potentially prediction, in relation to problem recognition and responsiveness to windows of opportunity. The first proposition relates to the compatibility of a problem with a network's beliefs and values for problem recognition. While the second proposition relates to the typology of the network for the opening of windows of opportunity in the problem stream.

While the two case studies presented and analysed here have supported the two propositions, a small n case study analysis can only go so far. It is therefore hoped that the identification of the two propositions will spur on further research that operationalises the role of networks and in turn contributes to sustained refinement and theory building in relation to problem stream processes. In turn this requires the MSA to be applied primarily as a theory to be tested, rather than as a heuristic to more readily understand an empirical case. As noted in the analysis, comparative applications of the MSA that are not just focused on the MSA's typical level of application (the national level) but are instead concerned with local and indeed multi-level agenda setting dynamics where differences in governance context may come to the fore more readily, may offer clearer opportunities for the role of networks to be explored. Moreover, while not the primary aim of this paper the MSA's application to two local level case studies here has demonstrated the MSA's applicability to the local level and in particular its value in uncovering local problem recognition dynamics.

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